





Author Index

Adler, P.N., see Park, W.-J. (45) 127

Baker, B.S., see Rabelo, E.M.L. (45) 49 Brem, G., see Kaltschmidt, C. (45) 203 Britten, R.J., see Cameron, R.A. (45) 31 Britten, R.J., see Leahy, P.S. (45) 255

Cameron, R.A., Smith, L.C., Britten, R.J. and Davidson, E.H. Ligand-dependent stimulation of introduced mammalian brain receptors alters spicule symmetry and other morphogenetic events in sea urchin embryos (45) 31

Cameron, R.A., see Leahy, P.S. (45) 255 Capco, D.G., see Gallicano, G.I. (45) 211 Cardellini, P., Polo, C. and Coral, S.

Suramin and heparin: aspecific inhibitors of mesoderm induction in the *Xenopus laevis* embryo (45) 73

Chambers, I., see Yoshida, K. (45) 163 Chambon, P., see Dollé, P. (45) 91 Chambon, P., see Mendelsohn, C. (45) 227 Chen, L., see Soprano, D.R. (45) 243 Clement, J.H., see Lef, J. (45) 117 Clifford, J., see Mendelsohn, C. (45) 227 Coral, S., see Cardellini, P. (45) 73

Crews, S.T., see Franks, R.G. (45) 269

Davidson, E.H., see Cameron, R.A. (45) 31 Davidson, E.H., see Leahy, P.S. (45) 255 De Robertis, E.M., see Pfeffer, P.L. (45) 147 Dickson, C., see Mason, I.J. (45) 15

Dollé, P., Fraulob, V., Kastner, P. and Chambon, P.
Developmental expression of murine retinoid X receptor (RXR)
genes (45) 91

Dziadek, M., see Thomas, T. (45) 193

Emori, Y., see Sugaya, R. (45) 139 Estrabot, A.M.G., see Richardson, J.C. (45) 173

Franks, R.G. and Crews, S.T.

Transcriptional activation domains of the single-minded bHLH protein are required for CNS midline cell development (45) 269
Fraulob, V., see Dollé, P. (45) 91
Fuller-Pace, F., see Mason, I.J. (45) 15

Gallicano, G.I., Larabell, C.A., McGaughey, R.W. and Capco, D.G. Novel cytoskeletal elements in mammalian eggs are composed of a unique arrangement of intermediate filaments (45) 211

Glaser, G., see Lukowitz, W. (45) 105 Guénal, I., see Mével-Ninio, M. (45) 155 Gyda, III, M., see Soprano, D.R. (45) 243

Harnish, D.C., see Soprano, D.R. (45) 243 Hartmann, C., Taubert, H., Jäckle, H. and Pankratz, M.J.

A two-step mode of stripe formation in the *Drosophila* blastoderm requires interactions among primary pair rule genes (45) 3 Hosoya, T., see Sugaya, R. (45) 139 Hülskamp, M., see Lukowitz, W. (45) 105

Ishimaru, S., see Sugaya, R. (45) 139

Jäckle, H., see Hartmann, C. (45) 3 Jiang, H., see Soprano, D.R. (45) 243

Kaltschmidt, C., Muller, M., Brem, G. and Renkawitz, R. DNase I hypersensitive sites far upstream of the rat tryptophan oxygenase gene direct developmentally regulated transcription in livers of transgenic mice (45) 203

Kastner, P., see Dollé, P. (45) 91
Kishimoto, T., see Yoshida, K. (45) 163
Knöchel, W., see Lef, J. (45) 117
Knox, M.A., see Leahy, P.S. (45) 255
Kochhar, D.M., see Soprano, D.R. (45) 243
Köster, M., see Lef, J. (45) 117

Larabell, C.A., see Gallicano, G.I. (45) 211 Larkin, S., see Mendelsohn, C. (45) 227

Leahy, P.S., Cameron, R.A., Knox, M.A., Britten, R.J. and Davidson, E.H.

Development of sibling inbred sea urchins: Normal embryogenesis, but frequent postembryonic malformation, arrest and lethality (45) 255

Lef, J., Clement, J.H., Oschwald, R., Köster, M. and Knöchel, W. Spatial and temporal transcription patterns of the forkhead related XFD-2/XFD-2' genes in Xenopus laevis embryos (45) 117

LeMeur, M., see Mendelsohn, C. (45) 227 Limbourg-Bouchon, B., see Mével-Ninio, M. (45) 155

Liu, J., see Park, W.-J. (45) 127

Lukowitz, W., Schröder, C., Glaser, G., Hülskamp, M. and Tautz, D. Regulatory and coding regions of the segmentation gene hunch-back are functionally conserved between Drosophila virilis and Drosophila melanogaster (45) 105

Mark, M., see Mendelsohn, C. (45) 227

Mason, I.J., Fuller-Pace, F., Smith, R. and Dickson, C. FGF-7 (keratinocyte growth factor) expression during mouse development suggests roles in myogenesis, forebrain regionalisation and epithelial-mesenchymal interactions (45) 15

McGaughey, R.W., see Gallicano, G.I. (45) 211

Mendelsohn, C., Larkin, S., Mark, M., LeMeur, M., Clifford, J., Zelent, A. and Chambon, P.

RAR β isoforms: distinct transcriptional control by retinoic acid and specific spatial patterns of promoter activity during mouse embryonic development (45) 227

Mével-Ninio, M., Guénal, I. and Limbourg-Bouchon, B.

Production of dominant female sterility in *Drosophila* melanogaster by insertion of the ovo^{DI} allele on autosomes: use of transformed strains to generate germline mosaics (45) 155

Morio, T., Takeuchi, I. and Tasaka, M.

Cooperation of positively and negatively acting promoter elements determines prespore-specific transcription of Dp87 gene in Dictvostelium (45) 59

Muller, M., see Kaltschmidt, C. (45) 203

Nichols, J., see Yoshida, K. (45) 163

Oschwald, R., see Lef, J. (45) 117

Pankratz, M.J., see Hartmann, C. (45) 3

Park, W.-J., Liu, J. and Adler, P.N.

The frizzled gene of Drosophila encodes a membrane protein with an odd number of transmembrane domains (45) 127

Pfeffer, P.L. and De Robertis, E.M.

Regional specificity of RARy isoforms in Xenopus development (45) 147

Polo, C., see Cardellini, P. (45) 73

Rabelo, E.M.L., Baker, B.S. and Tata, J.R.

Interplay between thyroid hormone and estrogen in modulating expression of their receptor and vitellogenin genes during Xenopus metamorphosis (45) 49

Renkawitz, R., see Kaltschmidt, C. (45) 203

Richardson, J.C., Estrabot, A.M.G. and Woodland, H.R.

XrelA, a Xenopus maternal and zygotic homologue of the p65 subunit of NF-kB. Characterisation of transcriptional properties in the developing embryo and identification of a negative interference mutant (45) 173

Saigo, K., see Sugaya, R. (45) 139

Saito, M., see Yoshida, K. (45) 163

Satre, M., see Soprano, D.R. (45) 243

Schröder, C., see Lukowitz, W. (45) 105

Shoyab, M., see Yoshida, K. (45) 163

Smith, A., see Yoshida, K. (45) 163

Smith, L.C., see Cameron, R.A. (45) 31

Smith, R., see Mason, I.J. (45) 15

Soprano, D.R., Gyda, III, M., Jiang, H., Harnish, D.C., Ugen, K., Satre, M., Chen, L., Soprano, K.J. and Kochhar, D.M.

A sustained elevation in retinoic acid receptor-\(\beta \)2 mRNA and protein occurs during retinoic acid-induced fetal dysmorphogenesis (45) 243

Soprano, K.J., see Soprano, D.R. (45) 243

Sugaya, R., Ishimaru, S., Hosoya, T., Saigo, K. and Emori, Y.

A Drosophila homolog of human proto-oncogene ret transiently expressed in embryonic neuronal precursor cells including neuroblasts and CNS cells (45) 139

Taga, T., see Yoshida, K. (45) 163

Takeuchi, I., see Morio, T. (45) 59

Tasaka, M., see Morio, T. (45) 59

Tata, J.R., see Rabelo, E.M.L. (45) 49

Taubert, H., see Hartmann, C. (45) 3

Tautz, D., see Lukowitz, W. (45) 105

Thomas, T. and Dziadek, M.

Expression of collagen $\alpha 1(IV)$, laminin and nidogen genes in the embryonic mouse lung: implications for branching morphogenesis (45) 193

Ugen, K., see Soprano, D.R. (45) 243

Woodland, H.R., see Richardson, J.C. (45) 173

Yasukawa, K., see Yoshida, K. (45) 163

Yoshida, K., Chambers, I., Nichols, J., Smith, A., Saito, M., Yasukawa, K., Shoyab, M., Taga, T. and Kishimoto, T.

Maintenance of the pluripotential phenotype of embryonic stem cells through direct activation of gp130 signalling pathways (45)

Zelent, A., see Mendelsohn, C. (45) 227



Mechanisms of Development 45 (1994) 281-283



Subject Index

Basement membrane

Embryonic lung; Branching morphogenesis; Laminin; Nidogen; Collagen IV (Thomas, T. (45) 193)

Basic-helix-loop-helix

Drosophila; PAS domain; single-minded; Transcriptional activator (Franks, R.G. (45) 269)

Branching morphogenesis

Embryonic lung; Basement membrane; Laminin; Nidogen; Collagen IV (Thomas, T. (45) 193)

Cellular interaction

Signal transduction; Conditional specification; 7TD receptor; Serotonin; Nuclear distribution (Cameron, R.A. (45) 31)

Ciliary neurotrophic factor

Differentiation inhibiting activity; Leukemia inhibitory factor; Oncostatin M; Signal transduction; Self-renewal; Interleukin-6 (Yoshida, K. (45) 163)

Cis-acting elements

Dictyostelium; Prespore-specific gene; Transcriptional regulation (Morio, T. (45) 59)

Collagen IV

Embryonic lung; Branching morphogenesis; Basement membrane; Laminin; Nidogen (Thomas, T. (45) 193)

Conditional specification

Signal transduction; Cellular interaction; 7TD receptor; Serotonin; Nuclear distribution (Cameron, R.A. (45) 31)

Cytoskeleton

Mammalian egg; Mammalian embryo; Intermediate filament; Mouse (Gallicano, G.I. (45) 211)

Dictvostelium

Prespore-specific gene; Transcriptional regulation; Cis-acting elements (Morio, T. (45) 59)

Differentiation inhibiting activity

Leukemia inhibitory factor; Ciliary neurotrophic factor; Oncostatin M; Signal transduction; Self-renewal; Interleukin-6 (Yoshida, K. (45) 163)

DNase I hypersensitive sites

Gene expression; Liver; Transgenic mice; Tryptophan oxygenase (Kaltschmidt, C. (45) 203)

Drosophila

Evolution; Enhancer element; hunchback (Lukowitz, W. (45) 105)

Ret; Receptor PTK; Neuroblast; Neurogenesis (Sugaya, R. (45) 139)

Ovo^{D1} mutation; Germline clone (Mével-Ninio, M. (45) 155)

Basic-helix-loop-helix; PAS domain; single-minded; Transcriptional activator (Franks, R.G. (45) 269)

Drosophila melanogaster

Tissue polarity; frizzled; Membrane protein; Topology (Park, W.-J. (45) 127)

Embryogenesis

X. laevis; Fork head; Transcription factor (Lef, J. (45) 117)

Embryonic lung

Branching morphogenesis; Basement membrane; Laminin; Nidogen; Collagen IV (Thomas, T. (45) 193)

Enhancer element

Drosophila; Evolution; hunchback (Lukowitz, W. (45) 105)

Epithelial-mesenchymal interaction

Fibroblast growth factor; KGF; Myocardium; Skeletal muscle; Forebrain (Mason, I.J. (45) 15)

Estrogen

Xenopus; Metamorphosis; Vitellogenin gene expression; Thyroid hormone; Receptor autoinduction (Rabelo, E.M.L. (45) 49)

Evolution

Drosophila; Enhancer element; hunchback (Lukowitz, W. (45) 105)

Fibroblast growth factor

KGF; Myocardium; Skeletal muscle; Forebrain; Epithelial-mesenchymal interaction (Mason, I.J. (45) 15)

Forebrain

Fibroblast growth factor; KGF; Myocardium; Skeletal muscle; Epithelial-mesenchymal interaction (Mason, I.J. (45) 15)

Fork head

X. laevis; Transcription factor; Embryogenesis (Lef, J. (45) 117)

frizzled

Drosophila melanogaster; Tissue polarity; Membrane protein; Topology (Park, W.-J. (45) 127)

Gene expression

DNase I hypersensitive sites; Liver; Transgenic mice; Tryptophan oxygenase (Kaltschmidt, C. (45) 203)

Germline clone

Drosophila; Ovo^{D1} mutation (Mével-Ninio, M. (45) 155)

Heparin

Suramin; Xenopus; Mesoderm; induction (Cardellini, P. (45) 73)

hunchback

Drosophila; Evolution; Enhancer element (Lukowitz, W. (45) 105)

Inbreeding

Naturally occurring recessive; Territorial specification (Leahy, P.S. (45) 255)

induction

Suramin; Heparin; Xenopus; Mesoderm (Cardellini, P. (45) 73)

In situ hybridization

Retinoic acid receptor; RAR; RXR; Mouse development (Dollé, P. (45) 91)

Interleukin-6

Differentiation inhibiting activity; Leukemia inhibitory factor; Ciliary neurotrophic factor; Oncostatin M; Signal transduction; Self-renewal (Yoshida, K. (45) 163)

Intermediate filament

Cytoskeleton; Mammalian egg; Mammalian embryo; Mouse (Gallicano, G.I. (45) 211)

Interstripe repressor element

Stripe formation; Pair rule gene (Hartmann, C. (45) 3)

KGF

Fibroblast growth factor; Myocardium; Skeletal muscle; Forebrain; Epithelial-mesenchymal interaction (Mason, I.J. (45) 15)

Laminin

Embryonic lung; Branching morphogenesis; Basement membrane; Nidogen; Collagen IV (Thomas, T. (45) 193)

Leukemia inhibitory factor

Differentiation inhibiting activity; Ciliary neurotrophic factor; Oncostatin M; Signal transduction; Self-renewal; Interleukin-6 (Yoshida, K. (45) 163)

Liver

DNase I hypersensitive sites; Gene expression; Transgenic mice; Tryptophan oxygenase (Kaltschmidt, C. (45) 203)

Mammalian egg

Cytoskeleton; Mammalian embryo; Intermediate filament; Mouse (Gallicano, G.I. (45) 211)

Mammalian embryo

Cytoskeleton; Mammalian egg; Intermediate filament; Mouse (Gallicano, G.I. (45) 211)

Membrane protein

Drosophila melanogaster; Tissue polarity; frizzled; Topology (Park, W.-J. (45) 127)

Mesoderm

Suramin; Heparin; Xenopus; induction (Cardellini, P. (45) 73)

Metamorphosis

Xenopus; Vitellogenin gene expression; Thyroid hormone; Estrogen; Receptor autoinduction (Rabelo, E.M.L. (45) 49)

Mouse

Cytoskeleton; Mammalian egg; Mammalian embryo; Intermediate filament (Gallicano, G.I. (45) 211)

Mouse development

Retinoic acid receptor; RAR; RXR; In situ hybridization (Dollé, P. (45) 91)

Myocardium

Fibroblast growth factor; KGF; Skeletal muscle; Forebrain; Epithelial-mesenchymal interaction (Mason, I.J. (45) 15)

Naturally occurring recessive

Inbreeding; Territorial specification (Leahy, P.S. (45) 255)

Neuroblast

Ret; Receptor PTK; Neurogenesis; Drosophila (Sugaya, R. (45) 139)

Neurogenesis

Ret; Receptor PTK; Neuroblast; Drosophila (Sugaya, R. (45) 139)

NF-KB

Xenopus; XrelA; Transcription control (Richardson, J.C. (45) 173)

Nidoger

Embryonic lung; Branching morphogenesis; Basement membrane; Laminin; Collagen IV (Thomas, T. (45) 193)

Nuclear distribution

Signal transduction; Cellular interaction; Conditional specification; 7TD receptor; Serotonin (Cameron, R.A. (45) 31)

Oncostatin M

Differentiation inhibiting activity; Leukemia inhibitory factor; Ciliary neurotrophic factor; Signal transduction; Self-renewal; Interleukin-6 (Yoshida, K. (45) 163)

Ovo D1 mutation

Drosophila; Germline clone (Mével-Ninio, M. (45) 155)

Pair rule gene

Interstripe repressor element; Stripe formation (Hartmann, C. (45) 3)

PAS domain

Basic-helix-loop-helix; *Drosophila*; *single-minded*; Transcriptional activator (Franks, R.G. (45) 269)

Prespore-specific gene

Dictyostelium; Transcriptional regulation; Cis-acting elements (Morio, T. (45) 59)

RAR

Retinoic acid receptor; RXR; Mouse development; In situ hybridization (Dollé, P. (45) 91)

RARy Isoform

Retinoic acid receptor; Xenopus; Tail (Pfeffer, P.L. (45) 147)

Receptor autoinduction

Xenopus; Metamorphosis; Vitellogenin gene expression; Thyroid hormone; Estrogen (Rabelo, E.M.L. (45) 49)

Receptor PTK

Ret; Neuroblast; Neurogenesis; Drosophila (Sugaya, R. (45) 139)

Ret

Receptor PTK; Neuroblast; Neurogenesis; Drosophila (Sugaya, R. (45) 139)

Retinoic acid

Retinoic acid receptors; Teratology (Soprano, D.R. (45) 243)

Retinoic acid receptor

RAR; RXR; Mouse development; In situ hybridization (Dollé, P. (45) 91)

RARy Isoform; Xenopus; Tail (Pfeffer, P.L. (45) 147)

Retinoic acid receptors

Retinoic acid; Teratology (Soprano, D.R. (45) 243)

DYD

Retinoic acid receptor; RAR; Mouse development; In situ hybridization (Dollé, P. (45) 91)

Self-renewal

Differentiation inhibiting activity; Leukemia inhibitory factor; Ciliary neurotrophic factor; Oncostatin M; Signal transduction; Interleukin-6 (Yoshida, K. (45) 163)

Serotonin

Signal transduction; Cellular interaction; Conditional specification; 7TD receptor; Nuclear distribution (Cameron, R.A. (45) 31)

Signal transduction

Cellular interaction; Conditional specification; 7TD receptor; Serotonin; Nuclear distribution (Cameron, R.A. (45) 31)

Differentiation inhibiting activity; Leukemia inhibitory factor; Ciliary neurotrophic factor; Oncostatin M; Self-renewal; Interleukin-6 (Yoshida, K. (45) 163)

single-minded

Basic-helix-loop-helix; *Drosophila*; PAS domain; Transcriptional activator (Franks, R.G. (45) 269)

Skeletal muscle

Fibroblast growth factor; KGF; Myocardium; Forebrain; Epithelial-mesenchymal interaction (Mason, I.J. (45) 15)

Stripe formation

Interstripe repressor element; Pair rule gene (Hartmann, C. (45) 3)

Suramin

Heparin; Xenopus; Mesoderm; induction (Cardellini, P. (45) 73)

Tail

Retinoic acid receptor; RARγ Isoform; Xenopus (Pfeffer, P.L. (45) 147)

7TD receptor

Signal transduction; Cellular interaction; Conditional specification; Serotonin; Nuclear distribution (Cameron, R.A. (45) 31)

Teratology

Retinoic acid; Retinoic acid receptors (Soprano, D.R. (45) 243)

Territorial specification

Naturally occurring recessive; Inbreeding (Leahy, P.S. (45) 255)

Thyroid hormone

Xenopus; Metamorphosis; Vitellogenin gene expression; Estrogen; Receptor autoinduction (Rabelo, E.M.L. (45) 49)

Tissue polarit

Drosophila melanogaster; frizzled; Membrane protein; Topology (Park, W.-J. (45) 127)

Topology

Drosophila melanogaster; Tissue polarity; frizzled; Membrane protein (Park, W.-J. (45) 127)

Transcriptional activator

Basic-helix-loop-helix; Drosophila; PAS domain; single-minded (Franks, R.G. (45) 269)

Transcriptional regulation

Dictyostelium; Prespore-specific gene; Cis-acting elements (Morio, T. (45) 59)

Transcription control

Xenopus; NF-κB; XrelA (Richardson, J.C. (45) 173)

Transcription factor

X. laevis; Fork head; Embryogenesis (Lef, J. (45) 117)

Transgenic mice

DNase I hypersensitive sites; Gene expression; Liver; Tryptophan oxygenase (Kaltschmidt, C. (45) 203)

Tryptophan oxygenase

DNase I hypersensitive sites; Gene expression; Liver; Transgenic mice (Kaltschmidt, C. (45) 203)

Vitellogenin gene expression

Xenopus; Metamorphosis; Thyroid hormone; Estrogen; Receptor autoinduction (Rabelo, E.M.L. (45) 49)

Xenopus

Metamorphosis; Vitellogenin gene expression; Thyroid hormone; Estrogen; Receptor autoinduction (Rabelo, E.M.L. (45) 49)

Suramin; Heparin; Mesoderm; induction (Cardellini, P. (45) 73)

Retinoic acid receptor; RARy Isoform; Tail (Pfeffer, P.L. (45) 147)

NF-κB; XrelA; Transcription control (Richardson, J.C. (45) 173)

X. laevi

Fork head; Transcription factor; Embryogenesis (Lef, J. (45) 117)

XrelA

Xenopus; NF-kB; Transcription control (Richardson, J.C. (45) 173)

